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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/017,504

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John O. Lamping

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05/07/2007

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EXAMINER

NGUYEN, CINDY

ART UNIT

PAPER NUMBER

2161

MAIL DATE

DELIVERY MODE

05/07/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/017,504

Applicant(s)

LAMPING ET AL.

Examiner

Cindy Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-11 and 15-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,5-11,15-18 and 21-23 is/are allowed.
- 6) ☒ Claim(s) 19 and 24-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

This is response to amendment filed 03/02/07.

### ***Response to Arguments***

Applicant's arguments, with respect to the rejection(s) of claim(s) 11 and 15-17 under 35 USC § 101 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

Applicant's arguments, with respect to the rejection(s) of claim(s) 19 and 24-27 under 35 USC § 102 have been fully considered but they are not persuasive.

Applicant's arguments on claims 19, that Liu fails to teach or suggest a clustering process that also takes as inputting a first hierarchy, the first hierarchy including at least a parent categories and a first child category and the second hierarchy including a portion of the first hierarchy and one or more additional categories coupled to the first hierarchy, at least one of the one or more additional categories being a second child category of the parent category of the first hierarchy. In respond, Liu is clearly discloses: inputting a first hierarchy, the first hierarchy including at least a parent categories and a first child category (i.e., all content categories fall into strict hierarchies, each hierarchy has a root: all users are included in the "everyone" user group, and all content is included in the "everything" category, any category may subsume child categories, which are children only of the one parent, col. 45, lines 10-16, Liu) and the second hierarchy (pseudo hierarchy) including a portion of the first hierarchy (pseudo

hierarchy still maintains parent-child relationships) and one or more additional categories coupled to the first hierarchy, at least one of the one or more additional categories being a second child category of the parent category of the first hierarchy (pseudo hierarchy still maintains parent-child relationships ,but allows for a document or user to partially belong to multiple categories, for example, document about “dogs” may belong 60% to “pet” category and 30% to a “mammal” category, col. 46, lines 12-17, Liu).

Applicant’s arguments on claims 27, that Liu fails to teach or suggest inputting an initial organization structure into the clustering process, the initial organization structure including one or more categories, wherein at least one of the items is not associated with any of the categories of the initial organization structure. In response, Liu is clearly discloses: inputting an initial organization structure into the clustering process, the initial organization structure including one or more categories, wherein at least one of the items is not associated with any of the categories of the initial organization structure (i.e. a strict hierarchy is defined as directed tree-like structure... strict hierarchies often fail to capture the actual, more complex between categories that documents or users may be associated with, strict hierarchies also fail to account for uncertainly that is indeterminacy of which category or groups a particular document or user belongs to, col. 45, lines 67 to col. 46, lines 12, Liu).

Applicant’s arguments, that Liu fails to teach or suggest a modification to at least one of the categories of the initial organization structure and a modification to the initial organization structure such that the first one of the items is associated with at least one

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of the categories in the resulting organization structure (pseudo hierarchy still maintains parent-child relationships ,but allows for a document or user to partially belong to multiple categories, for example, document about “dogs” may belong 60% to “pet” category and 30% to a “mammal” category, col. 46, lines 12-17, Liu).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 19, 24-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Liu et al. (US 6839680) (hereafter Liu).

Regarding claim 19, Liu discloses: a computer implemented method for clustering a plurality of items, the method comprising: inputting a first hierarchy, the first hierarchy includes at least a parent category and a first child category (i.e., all content categories fall into strict hierarchies, each hierarchy has a root: all users are included in the “everyone” user group, and all content is included in the “everything” category, any category may subsume child categories, which are children only of the one parent, col. 45, lines 10-16, Liu);

inputting a plurality of items, each of the plurality of items including information at least one of the items being associated with one of the categories in the first hierarchy (documents is collected, col. 50, lines 13-18; col. 50, 47-50, Liu);

processing by the computer the plurality of items based upon at least the first hierarchy and the information in each of the items (col. 47, lines 20-32, Liu);  
automatically determining a second hierarchy based upon the processing of the plurality of items in the clustering process, the second hierarchy including a portion of the first hierarchy and one or more additional categories coupled to the first hierarchy, at least one of the one or more additional categories being a second child category of the parent category of the first hierarchy (pseudo hierarchy still maintains parent-child relationships ,but allows for a document or user to partially belong to multiple categories, for example, document about “dogs” may belong 60% to “pet” category and 30% to a “mammal” category, col. 46, lines 12-17, Liu);

storing the second hierarchy in memory (col. 49, lines 24-28; col. 50, lines 38-40, Liu);

assigning each of the plurality of items to a category of the second hierarchy (col. 50, lines 63-66, Liu).

Regarding claim 24, , all the limitations of this claim have been noted in the rejection of claim 19 above. In addition, Liu discloses: wherein the clustering process

guarantees that the resulting organization structure is an extension of the initial organization structure (col. 49, lines 37-43, Liu).

Regarding claim 25, , all the limitations of this claim have been noted in the rejection of claim 24 above. In addition, Liu discloses: wherein processing in the clustering process comprises: forming a tentative cluster from at least two of the items; determining whether the tentative cluster is consistent with an extension of the initial organization structure (col. 45, lines 52-55, Liu); and rejecting the tentative cluster in the event that the tentative cluster is inconsistent with an extension of the initial organization structure (col. 45, lines 36-51, Liu).

Regarding claim 26, , all the limitations of this claim have been noted in the rejection of claim 19 above. In addition, Liu discloses: wherein the first hierarchy includes at least a parent category and a child category and wherein the guided clustering process includes: interposing a new category between a parent category of the initial organization structure and a child category of the initial organization structure (col. 46, lines 12-29, Liu).

Regarding claim 27, Liu discloses: A method for clustering a plurality of items, each of the items including information, the method comprising:

inputting a plurality of items, each of the items including information, into a clustering process (documents is collected, col. 50, lines 13-18; col. 50, 47-50, Liu);

inputting an initial organization structure into the clustering process, the initial organization structure including one or more categories, wherein at least one of the items is not associated with any of the categories of the initial organization structure (i.e. a strict hierarchy is defined as directed tree-like structure... strict hierarchies often fail to capture the actual, more complex between categories that documents or users may be associated with, strict hierarchies also fail to account for uncertainty that is indeterminacy of which category or groups a particular document or user belongs to, col. 45, lines 67 to col. 46, lines 12, Liu);

processing using at least processing hardware the plurality of items based upon at least the initial organization structure and the information in each of the items in at least the clustering process (col. 45, lines 52-64; col. 47, lines 20-32, Liu)

automatically determining using at least the processing hardware a resulting organization structure based upon the processing of the plurality of items, the resulting organization structure comprising at least a portion of the initial organization structure and a modification to at least one of the categories of the initial organization structure and a modification to the initial organization structure such that the first one of the items is associated with at least one of the categories in the resulting organization structure (pseudo hierarchy still maintains parent-child relationships ,but allows for a document or user to partially belong to multiple categories, for example, document about “dogs” may belong 60% to “pet” category and 30% to a “mammal” category, col. 46, lines 12-17, Liu); and



storing the resulting organization structure in memory (col. 49, lines 24-28; col. 50, lines 38-40, Liu).

***Allowable Subject Matter***

Claims 1, 5-11, 15-18, 21-23 are allowable.

The following is an examiner's statement of reasons for allowance: the prior art of record failed to disclose: make obvious, or otherwise suggest adding a first additional feature to each of the first feature vector and the second feature vector, the first additional feature representing a first category of the initial organization structure, the first additional feature in the first feature vector corresponding to a degree to which the first item is similar to one or more items associated with the first category of the initial organization structure, the first additional feature in the second feature vector corresponding to a degree to which the second item is similar to one or more items associated with the first category of the initial organization structure as recited in claim 1.

The following is an examiner's statement of reasons for allowance: the prior art of record failed to disclose: make obvious, or otherwise suggest extending the feature vector of each of the first item and the second item with an additional feature representing a category of the initial organization structure, the additional feature in each feature vector relating to a degree to which respective item is similar to one or more items associated with the corresponding category of the initial organization structure as claim 11.

The dependent claims 5-10, 15-18 and 21-23, being further limiting to the independent claims 1 and 11 definite and fully enable by the specification are also allowed.

### **Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pirolli et al. (U.S 5895470). System for categorizing documents in a linked collection of documents.

Hickerman et al. (U.S 6216134). Method and system for visualization of clusters and classifications.

Keith (U.S 6629097). Displaying implicit associations among items in loosely structured data set.

Marques (U.S 6182066). Category processing of query topics and electronic document content topics.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Contact Information***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 571-272-4025. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Cindy Nguyen  
May 1, 2007



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SUPERVISORY PATENT EXAMINER